

Client's Ref: A00154 FILE: 0611-6122US/Final

Date: 90-10-30/Jasper/Kevin Smith

## What is claimed is:

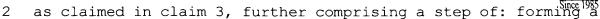


- 1. A method of manufacturing a liquid crystal display panel,
  2 comprising the steps of:
- forming a plurality of pixels on a first substrate;
- 4 forming a plurality of micro cell structures on the first
- 5 substrate, wherein each micro cell structure surrounds at least
- 6 one pixel;
- 7 forming a first alignment layer on the first substrate;
- 8 providing the micro cell structures with a liquid crystal
- 9 utilizing Ink Jet Printing technology; and
- 10 combining the first substrate with a second substrate by a
- 11 sealing member.
- 2. A method of manufacturing a liquid crystal display panel
- 2 as claimed in claim 1, wherein the pixel comprises a data line
- 3 and a gate line.
- 1 3. A method of manufacturing a liquid crystal display panel
- 2 as claimed in claim 2, further comprising the steps of:
- forming a photoresist layer on the first substrate; and
- 4 forming the micro cell structures on the data lines and the
- 5 gate lines by carrying out the photolithography on the
- 6 photoresist layer.
- 4. A method of manufacturing a liquid crystal display panel
- 2 as claimed in claim 3, wherein all the micro cell structures have
- 3 the same height by planarization.
- 1 5. A method of manufacturing a liquid crystal display panel



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- 3 color filter and a second alignment layer on the second substrate.
- 1 6. A method of manufacturing a liquid crystal display panel
- 2 as claimed in claim 1, wherein each pixel comprises a color filter
- 3 and a black matrix surrounding the pixel.
- 7. A method of manufacturing a liquid crystal display panel
- 2 as claimed in claim 6, further comprising the steps of:
- forming a photoresist layer on the first substrate; and
- forming the micro cell structures covering the black matrix
- 5 by carrying out the photolithography on the photoresist layer.
- 1 8. A method of manufacturing a liquid crystal display panel
- 2 as claimed in claim 7, wherein all the micro cell structures have
- 3 the same height by planarization.
- 9. A method of manufacturing a liquid crystal display panel
- 2 as claimed in claim 7, further comprising a step of: forming a
- 3 plurality of pixels and a second alignment layer on the second
- 4 substrate, wherein each pixel has a data line and a gate line.
- 1 10. A method of manufacturing a liquid crystal display panel
- 2 as claimed in claim 1, wherein the adjacent micro cell structures
- 3 are connected by a passage.
- 1 11. A method of manufacturing a liquid crystal display panel
- 2 as claimed in claim 1, wherein the Ink Jet Printing technology
- 3 is a thermal bubble type Ink Jet Printing technology.



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1 12. A method of manufacturing a liquid crystal display panel

2 as claimed in claim 1, wherein the Ink Jet Printing technology

3 is a micro piezoelectric type Ink Jet Printing technology.

- 1 13. A method of manufacturing a liquid crystal display panel
- 2 as claimed in claim 1, wherein the sealing member is prepared
- 3 before injecting the liquid crystal into the micro cell
- 4 structures.
- 1 14. A method of manufacturing a liquid crystal display panel
- 2 as claimed in claim 1, wherein the sealing member is prepared
- 3 after injecting the liquid crystal into the micro cell
- 4 structures.
- 1 15. A method of manufacturing a liquid crystal display panel
- 2 as claimed in claim 1, wherein the sealing member is prepared when
- 3 the liquid crystal is injected into the micro cell structures.
- 1 16. A method of manufacturing a liquid crystal display panel
- 2 as claimed in claim 1, further comprising a step of: forming a
- 3 trench between the sealing member and the micro cell structures.
- 1 17. A method of manufacturing a liquid crystal display panel
- 2 as claimed in claim 1, further comprising the steps of:
- 3 providing the liquid crystal within the micro cell
- 4 structures at the condition of normal air pressure; and
- 5 combining the first and second substrates together at the
- 6 condition of vacuum.
- 1 18. A method of manufacturing a liquid crystal display panel

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- 2 as claimed in claim 1, further comprising the steps of:
- 3 providing the liquid crystal within the micro cell
- 4 structures at the condition of vacuum; and
- 5 combining the first and second substrates together at the
- 6 condition of normal air pressure.